Risk factors affecting the incidence of chronic kidney disease

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To the Editor: We were interested to read the study of risk factors for chronic kidney disease (CKD) by Yamagata *et al.*[1] They reported that high blood pressure, diabetes, hyperlipidemia, obesity, smoking, and alcohol consumption affect the development of CKD, consistent with previous studies. Nonsteroidal antiinflammatory drugs (NSAIDs) are commonly used and its safety may also be questionable for the development of CKD. However, they did not report any statement about the usage of NSAIDs in their population.

It is well known that NSAIDs can cause analgesic nephropathy or chronic interstitial nephritis; accordingly, it might be another risk factor for the development of CKD. Several previous researches suggest that regular use of large compounds of NSAIDs may increase the risk of CKD.[2,3] In our clinical practice, we have also experienced some cases of chronic interstitial nephritis associated with chronic use of NSAIDs. There is also evidence that the elderly are particularly at risk for a critical decline of the glomerular filtration rate after using NSAIDs.[4] In the study by Yamagata *et al.*,[1] the mean age of the participants was 61.8 and 58.3 years in men and women, respectively. NSAIDs are among the most widely used medications in the elderly because of osteoarthritis. Thus, the status of NSAIDs usage is important in this study. Finally, in our opinion, NSAIDs are a substantial contributing factor on renal function and can cause acute or chronic renal failure, especially in the elderly. Physicians should consider NSAIDs as another risk factor for CKD.

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Response to 'Risk factors affecting the incidence of chronic kidney disease'

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In a letter to the editor, Targut *et al.*[1] have questioned whether usage of non-steroidal anti-inflammatory drugs (NSAIDs) should be considered as one of the risk factor for developing chronic kidney disease (CKD). Unfortunately, we did not have any information about the usage of NSAIDs in our cohort. Consequently, we could not refer to the usage of NSAIDs as a risk factor for developing CKD. However, a typical case of analgesic nephropathy, which has renal papillary necrosis and urothelial capillary sclerosis, is rarely seen recently, because phenacetin-containing drugs have been prohibited worldwide. And there is no convincing evidence for a causal relationship between long-term usage of non-phenacetin analgesics and analgesic nephropathy.[2] Mihtatsch *et al.*[3] reported that 20 years after removal of phenacetin from analgesic market, the typical lesions of analgesic nephropathy have disappeared during autopsy. Although incidence of end-stage renal disease patients with analgesic nephropathy has decreased, there is a possibility that long-term use of NSAIDs has been associated with chronic interstitial nephritis,[4] and these patients are included as a category of CKD. Furthermore, ingestion of NSAIDs is associated with acute glomerular filtration rate decreases, particularly in patients on low-sodium diet and in elderly patients.[5] Prevalence of CKD is very high in elderly subjects. We should pay much attention to their renal function before we prescribe NSAIDs. Finally, future epidemiological studies are needed to clarify whether the usage of NSAIDs is one of the risk factors for the development of CKD.

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